

REMARKS


Applicants appreciate the careful consideration and favorable treatment of the present application in which claims 21-26 are indicated as containing allowable subject matter.

The Examiner has rejected claims 1, 2, 5, 6, 10, 11, 13, 15, 16-18 and 20 as being anticipated by Tabata et al. Claims 7 and 8 stand rejected as being unpatentable over Tabata et al. Claims 3, 4 and 19 stand rejected as being unpatentable over Tabata et al. in view of Brinkmeyer et al. Claim 14 stands rejected as being unpatentable over Tabata et al. in view of Fujita et al.

Applicants respectfully traverse the present rejections based on the following comments. In particular, Applicants respectfully contend that the Examiner has overlooked at least one feature recited in the claims and more specifically, in independent claim 1. Claim 1 recites that the interactive rotary connection automatically sets itself to one of at least two rpm ratios depending on whether the electro-mechanical energy converter is working in the first or second mode.

This feature is described throughout the present application. For example, page 4, lines 16-20, of the originally filed application describes a gear-reduction ratio that sets itself is achieved in the present system, e.g., by using free-wheeling clutches whose engagement depends on the sense of rotation. However, it will be understand that a gear ratio that sets itself can also be realized by means of helical gears (gears whose teeth are cut at an angle to the rotary axis of the gear), where the gears are pushed in one axial direction or the other depending on the sense of rotation. Applicants respectfully contend that the above automatic reset feature is neither disclosed nor suggested by the cited references.

In Fig. 12 of the Tabata et al. reference, the clutches CE1 and CE2 are shown, and they are also described further in the written description, specifically, at col. 4, starting with line 57. In col. 5, lines 1-4, there is an explicit description that the clutches CE1 and CE2 are "friction type multiple-disc clutches" which are engaged and disengaged by means of a hydraulic actuator. A person of average skill in the art can easily imagine that if both clutches CE1 and CE2 are engaged at the same time, the planetary gear mechanism will be locked up, or if both clutches are

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disengaged, the planetary gear mechanism 16 will be in a kinetically undefined condition so that no torque is transmitted. To ensure that the clutches C1 and CE2 work together properly, there needs to be a sensor which detects the rotation of the planet-gear carrier. This sensor is shown in the drawing below the identification symbol CE1, but is not discussed further in the description. Consequently, one concludes that the arrangement and function of the clutches CE1 and CE2 of Fig. 12 of the cited Tabata et al. reference not only requires sensors, but that it also requires actuators which have to actuate the clutches under the command of an electronic control system.

The system of the present invention has no need for such sensors, actuators, and electronic controls because the measures as described by the present applicants allow the transmission ratios to set themselves **on their own**. This simplifies the design of our system significantly in comparison to the cited Tabata et al. reference.

In Fig. 2 of the cited Brinkmeyer et al. reference, a simple free-wheeling clutch is shown at the electro-mechanical energy converter. This means that the electro-mechanical energy converter can, e.g., receive a torque in one direction, but cannot deliver a torque in the opposite direction (or vice versa: it can deliver a torque, but in return cannot receive a torque). Accordingly, the electro-mechanical energy converter of Fig. 2 is not a starter/generator as described in the present application. Furthermore, there is no mention of different gear ratios in the Brinkmeyer et al. reference. Consequently, it is outright impossible for Brinkmeyer et al. to have any gear ratios that set themselves.

Accordingly, neither of the cited references nor a combination of the cited references discloses or even suggests the claimed system where the gear-reduction ratio sets itself. Based on the foregoing comments, Applicants respectfully direct the Examiner's attention to the above discussed feature that is recited in independent claim 1 and defines the present system over the prior art systems.

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In view of the above amendment, applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

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